HG
8963
.M52
A3

STATISTICAL BULLETIN
Metropolitan Life Insurance Co.

VOL. III. OCTOBER, 1922 No. 10

ON PREVENTING DEATHS IN EARLY INFANCY.

The first month is by all odds the most hazardous in the entire span of human life. It is easier to survive a year at age 65 than for a new born infant to reach the age of one month. Each year in the United States, more than 105,000 babies die before they are a month old. This means that more than four per cent. of all the two and a half million live-born babies in the United States die in this early period. To this number of deaths of live-born children should be added an equally large proportion of still-born children; they are, for the most part, carried to term, but for one reason or another die before they see the light of day. Together, the still-births and the deaths of infants under one month account for the deaths of more than two hundred thousand children. These deaths are more in number than those from tuberculosis and all of the infectious diseases combined except influenza and pneumonia.

The remarkable fact about this enormous loss of life is that little has been accomplished in the recent decade or two in controlling it. Infant mortality *after* the first month has been reduced one-half through such work as better feeding and care of babies. But the still-births and early infant deaths stay just about where they were fifteen or twenty years ago. The record of even the past five years shows no substantial improvement. In 1916, 4.3 per cent. and in 1920, 4.2 per cent. of the babies live-born in the United States Registration Area died before they reached the age of one month. This high mortality figure seems to be fairly constant for the several economic levels of the population, and only slightly lower in rural areas than in the cities.

Yet, it is not true that nothing has been done or that the situation is without hope. The movement for the care of mothers in

pregnancy, the so-called prenatal work, was organized not only to insure the safety of the mother, but also the survival of the baby during the first month of life. It is interesting that, in large measure, this work has succeeded, although not to the degree hoped for. A careful study of the experience of one experiment in prenatal work indicates that savings have been accomplished chiefly in reducing the number of premature births. Deaths from congenital debility, from syphilis, as well as from the injuries at birth, were not affected to an appreciable extent by this work. Prenatal nursing has affected mothers principally in the reduction of the toxemias. The stationary prevalence rate for sepsis and other causes on cases receiving only prenatal nursing care indicates a rather poor grade of obstetrical work. In other words, if more babies and mothers are to be saved, it will be necessary to develop a programme which combines not only prenatal work but also provision for excellent confinement care which would prevent the septic and mechanical injuries so often fatal to mother and baby. Many a good piece of careful prenatal work has been ruined by indifferent confinement service.

INFANT MORTALITY RATES IN AMERICAN CITIES, 1920

City	Deaths per 1,000*			City	Deaths per 1,000*		
	Total under 1 yr.	Under 1 mo.	Over 1 mo.		Total under 1 yr.	Under 1 mo.	Over 1 mo.
Los Angeles, Calif.	71.3	35.7	37.0	Albany, N. Y.	76.9	44.1	35.3
Oakland, Calif.	70.7	33.6	38.5	Buffalo, N. Y.	102.9	50.2	55.5
San Francisco, Calif.	61.8	33.9	28.9	New York, N. Y.	85.2	35.0	52.0
Bridgeport, Conn.	91.9	44.5	49.6	Rochester, N. Y.	84.4	47.2	39.1
Hartford, Conn.	98.7	53.4	47.9	Syracuse, N. Y.	104.7	49.2	58.3
New Haven, Conn.	87.0	37.6	51.4	Yonkers, N. Y.	88.6	43.9	46.8
Washington, D. C.	91.0	47.7	45.5	Akron, Ohio	83.8	45.2	40.4
Indianapolis, Ind.	91.0	47.9	45.2	Cincinnati, Ohio	82.4	39.9	44.2
Kansas City, Kan.	107.7	45.2	65.5	Cleveland, Ohio	87.3	41.1	48.2
Louisville, Ky.	86.5	41.6	46.8	Columbus, Ohio	96.4	45.7	53.1
Baltimore, Md.	105.9	44.4	64.3	Dayton, Ohio	84.7	45.3	41.3
Boston, Mass.	100.6	45.6	57.7	Toledo, Ohio	88.6	43.1	47.6
Cambridge, Mass.	95.9	44.5	53.9	Youngstown, Ohio	94.8	41.7	55.4
Fall River, Mass.	129.5	47.2	86.4	Portland, Ore.	59.6	38.3	22.2
Lowell, Mass.	134.7	53.9	85.5	Philadelphia, Pa.	90.6	35.8	56.9
New Bedford, Mass.	122.3	40.2	85.6	Pittsburgh, Pa.	111.3	49.0	65.6
Springfield, Mass.	84.8	46.2	40.5	Reading, Pa.	99.3	49.7	52.3
Worcester, Mass.	85.3	43.7	43.5	Scranton, Pa.	119.0	53.8	69.0
Detroit, Mich.	104.2	50.7	56.3	Salt Lake City, Utah.	72.5	37.9	35.9
Grand Rapids, Mich.	99.1	47.6	54.0	Norfolk, Va.	99.6	47.2	55.0
Minneapolis, Minn.	65.3	41.3	25.1	Richmond, Va.	114.1	45.5	71.9
St. Paul, Minn.	73.0	46.4	28.0	Seattle, Wash.	56.6	35.2	22.2
Omaha, Neb.	92.0	42.5	51.6	Spokane, Wash.	71.1	38.8	33.6
				Milwaukee, Wis.	94.1	48.7	47.6

*Deaths per 1,000 births for "total under 1 year" and "under 1 month." Deaths per 1,000 survivors at age of 1 month for "over 1 month."

That something can be done to reduce this annual toll of deaths of very young children is evident from the facts for certain cities in the United States Birth Registration Area. In forty-seven cities of the United States during 1920, the infant mortality rates under one month of age varied from 33.6 per 1,000 births in Oakland, Calif. to 53.9 per 1,000 in Lowell, Mass., as shown in the foregoing table.

The wide range of the rates for the mortality of infants under one month of age suggests, first, that there is as yet no established minimum rate and second, that much of the mortality may be caused by so-called environmental factors which influence also the mortality of infants beyond one month of age. This latter point is suggested by the fact that in about half the cities the rate for infants under one month of age is high where there is also a high mortality for infants in the last eleven months of the first year of life. There is, in fact, a high degree of correlation between the two sets of figures. The causal agencies of much of the early infant mortality seem to be the ignorance of mothers regarding the hygiene of pregnancy and the care of babies, and the inexpertness of so much of the obstetrical service available throughout the country.

From the facts available for hospital obstetrical services where mothers are brought under instruction and observation early in pregnancy, and are given delivery service and postpartum supervision of the highest order, we learn that the numbers of premature births, deaths of prematurely born babies, still-births, deaths from injury during the delivery process, and fatalities of women following toxemias, sepsis, difficulties with delivery, are reduced far below the level recorded for the general population.

Pessimism with regard to the saving of early infant life is entirely unwarranted by the facts for small groups which receive *adequate* obstetrical and nursing care *throughout* the puerperium. The appalling figures on the destruction of lives full of promise persist because, on a nation-wide scale, practically nothing is being done that *can* be done. What, for instance, would happen to the still-birth record, if syphilis in the mother could be detected and treated by the methods followed in the obstetrical service of one of the hospitals we know of? How many eclampsias, with their destructive effect upon mothers and infants, could be prevented if methods of prenatal observation and confinement care carried out by another service were to be adopted on a country-wide scale? How many threatened prematurities would be averted by the same sort of care, and how many of the infants whose premature birth is under present

conditions unavoidable, could be saved if proper incubation and feeding facilities were available? And probably most important, how many of the fatalities of mothers and babies which result from undue interference with the mechanism of labor and from neglect of strict asepsis, could be averted if the excellent confinement care given by the best maternity hospitals were more generally available?

Until these questions are frankly answered to the satisfaction of persons acquainted with what *has* been done under the guidance of able obstetricians, there is no ground whatever for the belief that this death-toll in early infant life is unavoidable, that it represents "Nature's failures," the "elimination of the unfit," the "progeny of unworthy stock," etc.* There is no better example of fallacious reasoning from few or no facts, than this encouragement of a policy of inactivity in the face of the prevailing waste of early infant life.

MORTALITY EXPERIENCE OF FIRST NINE MONTHS OF 1922.

Metropolitan Industrial policy-holders have had a remarkable health record for the first nine months of 1922. Only once in their history has there been a better one, namely, last year's unprecedented record. The death rates for both white and colored policy-holders are only a very little higher than for the corresponding period in 1921.

The most gratifying items are the declines in the mortality from communicable diseases of public health interest. Decreases have been registered for all of these except measles, influenza, and the pneumonias, and the increases for these three may be dismissed with the comment that the measles rate, although higher than last year, is still below average; that the relatively high influenza and pneumonia rates are due entirely to the influenza flurry of last winter; and that there has been no abnormal amount of influenza during recent months, and relatively few deaths from pneumonia. Among the white policy-holders the scarlet fever death rate declined 33 per cent. that for whooping cough 40 per cent. and that for diphtheria 28 per cent. from the January-to-September, 1921 figures. Among the colored policy-holders, the scarlet fever rate so far in 1922 is approximately one-quarter of that recorded last year and the whooping cough rate less than one-half. An increase was recorded for diphtheria, but this disease is not important, numerically, among colored people. The typhoid mortality among both white and colored policy-holders is about 20 per cent. lower than that for the first nine months of 1921.

*"Mortalities of Birth, Infancy and Childhood," *Medical Research Committee in connection with National Health Insurance, Special Report Series 10,* page 26, London, 1917.

With three-quarters of the year passed, the favorable situation with reference to tuberculosis still remains the outstanding feature of this remarkable health year; but an interesting element of the tuberculosis record of 1922, to date, is that the improvement in the gross rate this year is due almost entirely to another decline among colored policy-holders. The tuberculosis death rate of the whites (101.2 per 100,000) is almost identical with last year's rate of 101.9, but the figure for the colored dropped from 278.7 in 1921 to 255.6 this year. Another feature of the tuberculosis situation is that, for the whites, even the fractional decline recorded is due to lower rates for tuberculosis of the meninges and for other forms of tuberculous disease rather than for pulmonary tuberculosis, for which a fractional increase was recorded; among colored policy-holders declines are in evidence for all forms of the disease.

The relatively cool summer is reflected in a material decline in the mortality from diarrheal diseases. Improvement is also noted for puerperal conditions, due entirely, however, to lower mortality from puerperal septicemia.

The principal cardiac, vascular and renal conditions show higher rates this year. This is true, particularly, of organic heart disease, with smaller rises for cerebral hemorrhage and chronic nephritis. For these conditions the excesses in this year's rates over those for 1921 are more marked among colored than among white policy-holders, but even with the higher figures recorded for these "degenerative" conditions, we should not lose sight of the fact that the range of the death rates is low compared with that of most recent years. There is certainly nothing alarming about the small rises for cerebral hemorrhage and chronic nephritis. As for the considerable increase shown for organic diseases of the heart, developments of another year or two must be awaited in order to determine whether this is merely a transitory condition or whether it marks the beginning of an era in which the mortality from cardiac disease is again to take an upward swing.

Deaths from alcoholism, exclusive of those due to wood alcohol poisoning, numbered 202 for the nine months ending September 30th. This is 80 more deaths than occurred during the whole year 1921.

The situation with reference to deaths from violence is much less favorable than that for disease. Suicides and homicides increased slightly among the white policy-holders with small declines among the colored. It is true that there was a drop in the death rate for all accidents and that there were fewer accidental drowning fatalities; but fatal automobile casualties show a pronounced rise for white policy-holders.

Number of Deaths and Deathrates per 100,000 Persons Exposed First Nine Months of 1920, 1921 and 1922 Compared by Color, for Principal Causes of Death.

Industrial Department, Metropolitan Life Insurance Company. Premium-Paying Business

Cause of Death	Death Rates per 100,000 Persons Exposed					
	White			Colored		
	Jan.-Sept. 1922	Jan.-Sept. 1921	Jan.-Sept. 1920	Jan.-Sept. 1922	Jan.-Sept. 1921	Jan.-Sept. 1920
All Causes of Death	843.8	820.6	981.3	1404.3	1353.5	1577.0
Typhoid fever	4.4	5.4	5.4	10.2	12.4	11.1
Measles	5.1	4.2	11.2	2.0	1.9	4.6
Scarlet fever	5.6	8.3	6.4	.7	2.6	.7
Whooping cough	2.6	4.3	7.1	3.7	7.7	8.8
Diphtheria and croup	16.7	23.2	21.3	7.5	5.5	5.3
Influenza	22.6	8.1	65.0	47.6	18.8	104.4
Meningococcus meningitis	.7	1.0	1.0	.4	1.0	1.1
Tuberculosis—All forms	101.2	101.9	124.9	255.6	278.7	305.0
Tuberculosis of respiratory system	91.4	91.1	112.1	235.6	254.1	279.0
Tuberculosis of the meninges, etc.	4.4	5.2	6.5	5.4	6.5	6.5
Other forms of tuberculosis	5.3	5.7	6.3	14.6	18.2	19.4
Cerebral hemorrhage; apoplexy	59.8	57.2	58.2	95.6	88.5	88.3
Organic diseases of the heart	123.1	109.7	115.1	194.2	172.0	179.7
Total respiratory diseases	86.1	79.4	135.4	145.9	129.1	222.0
Bronchitis	5.6	5.3	8.9	11.5	10.6	12.5
Bronchopneumonia	27.1	24.1	39.7	35.9	32.0	47.4
Pneumonia—lobar & undefined	45.8	41.9	76.2	87.1	74.5	147.4
Other dis. of respiratory system	7.6	8.1	10.6	11.4	11.9	14.6
Diarrhea and enteritis	10.8	16.0	15.9	13.9	15.2	15.1
Under 2 years	5.1	6.6	7.3	3.8	3.9	4.9
2 years and over	5.7	9.4	8.6	10.0	11.3	10.2
Acute nephritis	5.3	5.3	5.4	17.3	17.1	19.3
Chronic nephritis	64.7	62.8	68.7	119.0	109.4	112.7
Total puerperal state	18.7	19.6	23.7	27.1	27.7	31.2
Puerperal septicemia	7.0	8.7	8.1	12.1	11.9	13.1
Puerperal albuminuria & conv'ls'ns	4.6	4.5	4.9	6.1	7.8	7.1
Other diseases of puerperal state	7.1	6.4	10.6	9.0	8.0	11.0
Total External Causes*	69.3	69.8	69.4	94.6	99.7	93.4
Suicides	8.3	8.0	6.3	5.0	5.4	3.8
Homicides	3.6	3.5	3.3	26.1	27.8	23.4
Accidental & unspecified violence†	57.3	58.2	59.3	63.4	66.4	65.9
Accidental drowning	8.5	9.9	7.4	10.1	11.4	10.0
Automobile accidents	13.2	11.9	10.6	7.8	8.5	6.0
War deaths	.1	.1	.6	‡	.1	.4
All other and ill-defined causes of death	247.3	244.3	247.3	369.1	366.2	374.1

*Includes "War deaths."
†Excludes "War deaths."
‡No deaths.

DEFECTS FOUND ON PHYSICAL EXAMINATIONS.

About a year ago, Dr. A. S. Knight, Medical Director of the Metropolitan Life Insurance Company, reported on the results of the physical examinations carried out annually by the Life Extension Institute for the Ordinary policy-holders of this Company. He showed for the persons examined in 1914 and 1915, that during the five years following the examinations, the actual deaths were 28 per cent. less than the number expected from the mortality rates prevailing among all the policy-holders in the Ordinary Department of the Company. We are now able to supplement the above results with a statement of the defects found in a group of close to 17,000 white male policy-holders who were examined by the Life Extension Institute for the Company during the year 1921. The findings present an extraordinary picture of the large number and gravity of the impairments found in a group of persons who are up and about and apparently able to carry on their day's work. The findings themselves are the best reason for the examinations.

Overweight is one of the most common of the impairments found. Virtually 13 per cent. of all the persons examined had a weight one-fifth or more in excess of the average for their height and age. This condition increases perceptibly with advancing age. Among these overweights, 55 per cent. required systematic medical or surgical attention according to the Medical Examiners, whereas, persons of normal weight showed only 18 per cent. who required such immediate attention. Exactly one per cent. of the group showed organic heart murmurs and six per cent. more had functional murmurs or irregularities. More than two and a half per cent. showed enlargement of the heart. Arterial thickening, moderate or marked, was present in over five per cent. of the cases and, at the ages over 55, this proportion rose to 17 per cent.

Respiratory findings were rather slight in proportion. Suspected and incipient tuberculosis together were observed in .4 per cent. of the cases. The abdominal findings—tenderness in the region of the appendix (2.3 per cent.), weak inguinal rings (5.9 per cent.) and inguinal hernia (5.1 per cent), will be of special interest because they are not ordinarily shown in collections of medical statistics.

The facts for the urinalyses are of value. Albumin in slight trace was discovered in 12.2 per cent., in definite trace in 2.3 per cent., and in marked amount in .8 per cent. of the examinations. A "trace" of sugar was reported in 3.4 per cent. of the specimens, and a marked amount (by quantitation) in .4 per cent. of the specimens.

Percentage of Persons in Specified Age Group Showing Important Physical Impairments

16,662 White Males in M. L. I. Co., Ordinary Department, 1921

Impairment	All ages	Under 25	25 to 34	35 to 44	45 to 54	55 & over
Persons in Specified Age Group {Number	16,662	861	5,885	5,799	3,023	1,094
Persons in Specified Age Group {Percentage	100.0	100.0	100.0	100.0	100.0	100.0
Weight:						
Over 20 per cent. underweight	2.4	2.0	3.2	2.3	1.5	2.1
Over 20 per cent. overweight	12.9	4.9	8.1	14.4	18.9	19.8
Eyes, Ears:						
Defective vision corrected	25.4	15.2	18.4	21.8	38.3	48.7
Defective vision uncorrected	29.5	28.3	28.9	30.0	29.4	31.8
Otitis media; discharging ear	1.2	2.0	1.3	1.0	1.2	.5
Nose and Throat:						
Deflected septum—slight	22.8	24.5	24.5	23.0	19.9	19.2
Deflected septum—marked	2.7	2.6	2.8	3.1	2.4	1.4
Enlarged, septic or buried tonsils	26.2	34.0	32.8	25.6	17.1	13.0
Naso-pharyngitis – chronic	5.5	4.9	6.0	5.4	5.0	4.4
Naso-pharyngitis – acute	5.5	6.5	5.5	5.5	5.0	6.2
Hypertrophic rhinitis – enlarged turbinates	14.8	19.0	16.9	15.1	10.7	10.1
Teeth and Root Infection:						
Carious teeth; septic roots	8.5	6.4	7.9	8.1	9.2	13.0
Slightly infected gums	10.3	3.6	7.3	11.1	14.7	16.4
Pyorrhea—definite	4.8	1.2	2.7	5.7	7.1	7.4
Heavy dentistry—X-ray advised	41.8	30.0	40.7	44.2	43.5	38.8
Heart and Pulse:						
Functional murmur or irregularity	6.0	6.9	5.5	5.5	6.3	9.3
Mitral murmur—stenosis	.2	.2	.2	.1	.2	.4
Mitral murmur—regurgitation	.7	.3	.7	.5	.9	1.5
Aortic murmur—stenosis	.1	...	.1	.1	...	.2
Aortic murmur—regurgitation	...	...	...	...	.1	.1
Enlargement	2.7	1.7	2.1	2.0	3.7	8.2
Slow pulse—below 58	1.4	1.4	1.0	1.4	1.7	1.9
Rapid pulse—above 90	8.3	10.9	8.2	8.2	8.6	6.7
Intermittent pulse—extra systoles	.5	.2	.4	.4	.8	1.7
Blood-vessels and Blood Pressure:						
Normal condition of blood vessels	77.4	89.5	83.6	76.6	71.6	55.2
Slight arterial thickening	14.3	7.2	10.9	14.9	18.2	24.0
Moderate arterial thickening	4.6	2.0	3.1	3.9	6.5	13.6
Marked arterial thickening	.6	.1	.4	.3	.7	3.7
Normal blood pressure	78.8	84.9	82.6	80.0	73.3	61.8
Blood pressure—20-40 above average	6.2	4.6	4.6	4.9	8.3	16.3
Blood pressure—40-60 above average	.7	.1	.2	.5	1.1	4.3
Blood pressure—60 or more above average	.3	.1	...	.1	.7	2.3
Stomach; Abdominal Organs:						
Constipation	39.7	34.6	39.5	40.4	40.1	40.3
Tenderness over liver and gall bladder	.6	.1	.4	.8	.9	.7
Tenderness in region of appendix	2.3	1.7	2.5	2.5	2.1	1.6
Hemorrhoids	12.3	4.4	9.3	12.8	17.7	16.3
Abdominal Organs; Inguinal Region:						
Weak inguinal rings	5.9	5.8	5.9	6.0	5.9	5.2
Inguinal hernia—no truss	2.2	1.4	1.4	2.2	3.1	4.8
Inguinal hernia—truss worn	2.9	.2	1.4	2.6	5.1	8.2
Varicocele	8.1	9.9	8.5	7.8	7.8	6.9
Genito-Urinary:						
Prostate gland—enlarged, hard, tender or boggy	3.9	1.0	2.0	3.1	5.6	15.8
Endocrine Disturbances:						
Enlarged thyroid – simple goiter	2.1	3.1	3.3	1.6	1.1	.8
Miscellaneous Impairments:						
Headache	15.4	13.7	16.4	16.6	13.7	10.0
Use of patent medicines	8.8	6.3	8.9	9.5	8.5	7.4
Use of laxatives	9.1	6.4	7.6	9.1	11.4	12.6
Frequent colds	17.7	22.9	20.8	16.4	14.2	13.6
Urinary Findings:						
Normal	74.1	72.6	75.2	75.4	72.4	66.8
Albumin – slight trace	12.2	11.6	11.6	11.8	13.5	15.1
Albumin – definite trace	2.3	3.3	2.2	1.7	2.4	4.9
Albumin – marked amount	.8	1.3	.6	.7	.9	1.2
Sugar – trace	3.4	4.1	3.0	3.4	3.9	4.0
Sugar – marked amount (quantitative)	.4	.1	.2	.3	.9	1.0
Casts—granular or epithelial	.3	.2	...	.4	.7	.7
Casts – hyaline	3.9	3.8	2.8	3.8	5.0	7.1
Indican	3.7	2.9	3.8	3.8	3.5	4.2

The focal infections play an important part in the findings. Enlarged septic or buried tonsils were found in 26 per cent. of the persons examined. A definite pyorrhea was observed in every twentieth case; carious teeth or septic roots in 8.5 per cent. "Heavy dentistry," where further X-ray examinations were advised, showed up in 42 per cent. of the persons examined.

MORTALITY STATISTICS OF INSURED WAGE EARNERS AS INDICES OF MORTALITY IN THE GENERAL POPULATION.

The usefulness of the death rates of Metropolitan Industrial policy-holders as indices of what is happening in the general population is shown clearly by comparison of the figures in the September number of the New York State *Monthly Vital Statistics Review* with those for the many millions insured in the Metropolitan Industrial Department. In every important particular, the results are in substantial agreement. The general death rate for the months of January to July, 1922, increased in each experience, although the margin over last year is greater in the general population of New York State than among the insured group.

The State reports that the increased mortality in 1922 "is chiefly due to a marked increase in mortality from diseases of the circulatory and respiratory systems." This is in precise agreement with the insurance experience in which, for the seven months January to July, deaths from organic heart disease ranged eleven per cent. and those from pneumonia thirteen per cent. higher than for the same months of 1921. As in the case of the population of New York State, there was a further decline in the tuberculosis death rate. In each experience, the mortality from alcoholism more than doubled, so far in 1922, as compared with 1921.

Other state and municipal mortality reports indicate, like the figures for the Metropolitan policy-holders, higher mortality in 1922 from cerebral hemorrhage and Bright's disease, lower rates from all of the principal communicable diseases of childhood, save measles, and reduced mortality from diarrheal complaints.

The close agreement of these insurance figures with those which are published subsequently from population sources, emphasizes the fact that the outstanding value of the current mortality statistics of the many millions of Metropolitan Industrial policy-holders lies in their timeliness. Relating, as these insurance statistics do, to virtually every state of the Union and to every Canadian province, they

present each month the very first reliable indication of mortality conditions in the two countries.

HEALTH REPORT FOR SEPTEMBER, 1922.

The death rate for September (7.4 per 1,000) is the lowest ever recorded for Metropolitan Industrial policy-holders. A comparison of the rates for the month with those for September, 1921, shows that for every disease listed in the table on page 11, with the single exception of measles, the mortality was lower this year than last. Even the measles rate is far below the average.

For deaths from violence, the picture is not so favorable. Accidents, suicides and homicides all recorded higher rates than for last September. Homicides have been reported in considerable numbers during recent months, and the September rate of 8.0 per 100,000 is equivalent to a 36 per cent. rise over that recorded for September of last year, as well as to an increase of 25 per cent. over the August, 1922, homicide mortality.

Although September, 1922, marks the minimum mortality ever recorded for *diseases*, the month is also featured by the fact that the automobile accident death rate (16.5 per 100,000) marks the maximum ever registered among Industrial policy-holders for this cause of death.

The general death rate for the large cities of the United States in September was 10.3 per 1,000. This was lower than the rate for the previous month, and for September a year ago, which was 10.5. Decreases were recorded in the morbidity for six communicable diseases—smallpox, diphtheria, typhoid fever, measles, scarlet fever and poliomyelitis. Slight increases were noted for whooping cough and malaria.

Typhoid fever reports for September are uniformly favorable. New Jersey, for example, reported 81 cases during the first three weeks of September, as against 196 for the corresponding weeks of 1921; New York reported 138 cases, and Georgia 95, as compared with 257 and 173 during the same weeks of last year. The diphtheria record throughout the country is decidedly favorable. The State of Georgia is a notable exception, with 254 case reports for the first three weeks of September as compared with 149 cases for the same weeks a year ago. Although most of the states reported declines in measles, there were more cases in New Jersey, New Mexico and Wisconsin than at this time in 1921. While the smallpox situation in general is better than at this time last year, larger numbers of cases are being reported from Illinois, Washington and West Virginia.

The table below shows the mortality among Industrial policyholders for September 1922, August 1922, September 1921, and for the year 1921.

METROPOLITAN LIFE INSURANCE COMPANY.

Death Rates per 100,000 for Principal Causes, Premium-Paying Business in Industrial Department.

(Annual Basis)

MONTHS OF AUGUST AND SEPTEMBER, 1922, AND OF SEPTEMBER, 1921.

CAUSES OF DEATH	RATE PER 100,000 LIVES EXPOSED			
	Sept., 1922	Aug., 1922	Sept., 1921	Year 1921
TOTAL—ALL CAUSES	743.6	816.7	812.0	870.6
Typhoid fever	9.4	8.9	14.0	6.7
Measles	.9	3.0	.6	3.2
Scarlet fever	2.6	2.0	3.4	7.0
Whooping cough	2.6	3.1	3.7	3.9
Diphtheria	10.1	9.1	18.1	23.8
Influenza	2.1	3.8	3.0	8.7
Tuberculosis (all forms)	93.0	115.1	103.1	117.4
Tuberculosis of resp'y system	85.6	105.0	92.1	105.6
Cancer	71.4	74.4	74.0	71.7
Cerebral hemorrhage	51.3	56.3	53.6	62.1
Organic diseases of heart	100.6	111.8	100.8	117.4
Pneumonia (all forms)	26.9	26.8	33.5	67.8
Other respiratory diseases	8.1	10.4	11.8	14.1
Diarrhea and enteritis	17.7	17.3	24.8	14.2
Bright's disease (chronic nephritis)	58.8	64.6	65.2	68.0
Puerperal state	14.8	16.4	16.3	19.8
Suicides	8.5	8.0	8.1	7.6
Homicides	8.0	6.4	5.9	6.7
Other external causes (excluding suicides and homicides)	62.6	67.3	62.0	57.6
Traumatism by automobile	16.5	15.5	14.5	12.2
All other causes	194.3	212.2	210.1	192.9

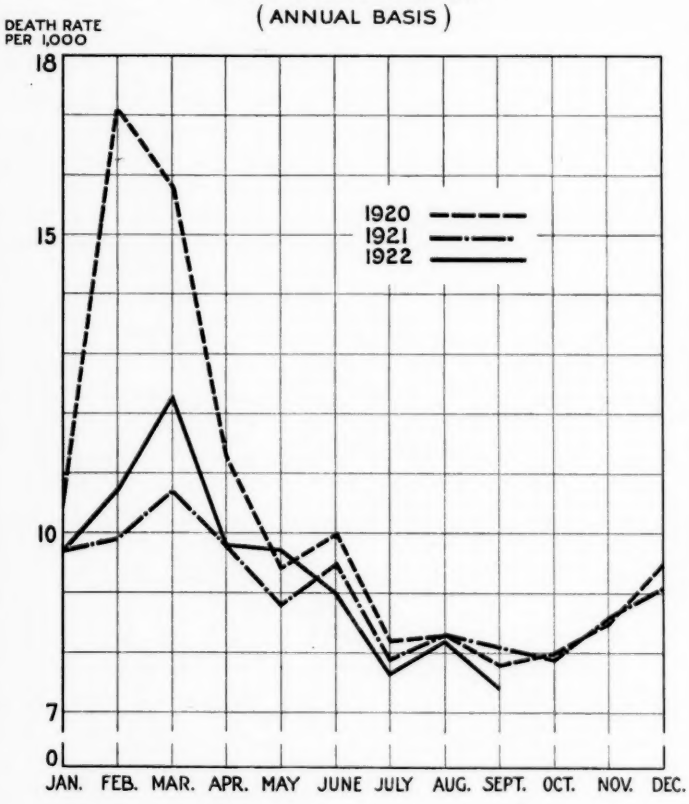
Correspondence on the subjects discussed in these BULLETINS may be addressed to: The Editor,

STATISTICAL BULLETIN,
Metropolitan Life Insurance Company,
1 Madison Avenue, New York City.

DEATHRATE *per* 1,000 IN SPECIFIED MONTHS OF 1920, 1921, 1922

METROPOLITAN LIFE INSURANCE COMPANY
INDUSTRIAL DEPARTMENT

(ANNUAL BASIS)



	1920	1921	1922
JAN.	10.4	9.7	9.7
FEB.	17.1	9.9	10.7
MAR.	15.8	10.7	12.3
APR.	11.3	9.8	9.8
MAY	9.4	8.8	9.7
JUNE	10.0	9.5	9.0

	1920	1921	1922
JULY	8.2	7.9	7.6
AUG.	8.3	8.3	8.2
SEPT.	7.8	8.1	7.4
OCT.	8.0	7.9	
NOV.	8.5	8.6	
DEC.	9.5	9.1	

PRINTED IN U. S. A.

77149